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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,704	12/13/2005	Takefumi Nishimuta	5000-5296	9335

27123 7590 03/29/2007
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NEW YORK, NY 10281-2101

EXAMINER

QUACH, TUAN N

ART UNIT	PAPER NUMBER
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2826

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/560,704	Applicant(s) NISHIMUTA ET AL.	
	Examiner Tuan Quach	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

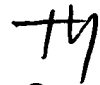
- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/13/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.


Tuan Quach
Primary Examiner

DETAILED ACTION

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa 6,316,998 B1 or Ogawa et al. 04-154312 taken with Hieda (2002/0011612) and Sugawa et al. (EP 1347506).

Re claims 1-8, Oikawa teaches a DC amplifier comprising a differential amplifier circuit including a MISFET transistor MP1 and MISFET transistor MP2. See Fig. 1, column 5 lines 4-36. Ogawa et al. also DC amplifier comprising differential circuit 1 employing MISFET transistors Tr1-Tr5 as shown in Fig. 4 and the abstract. Thus either Oikawa or Ogawa lack primarily the showing of the MISFET having components as characterized.

Hieda teaches MISFET transistor in which projection portion 13 is formed by a silicon substrate 10 having a first crystal surface as a primary surface and a second crystal surface as a side surface, a gate insulating film 18 on at least a part of a top surface and the side surface of the projecting portion 13, a gate 16 on the gate insulating film and source/drain 17 on both sides enclosing the gate insulating film. The various advantages include larger channel width, smaller planar surface area, improved carrier mobility, prevention of punch-through. The use of both n channel or p channel, e.g., as claimed in claim 6, is also shown, e.g., [0418], Figs. 48D, [0427] wherein CMOS circuit can be, See Figs. 1-4, 12, 20, 33, 48, and the corresponding descriptions, particularly [0175]-[0182], [0501]-[0541].

It would have been obvious to one skilled in the art in practicing Oikawa or Ogawa to have employed the MIS transistors in the above circuit since such devices have improved characteristics as taught by Hieda. Regarding the hydrogen removal from silicon surface using plasma, such correspond to a product by process limitation that does not impart patentability to the claims. It is well settled that a "product-by-process" claim is directed to the product per se, no matter how actually made. See *In re Thorpe et al.*, 227 USPQ 964 (CAFC, 1985) and the related case cited therein which make it clear that it is the final product per se which must be determined in a "product-by-process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product-by-process" claims or not. As stated in *Thorpe*,

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA, 1972); *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969).

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward

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with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)

Additionally, such hydrogen removal in plasma would have been conventional and obvious as evidenced by Sugawa et al. the abstract [0015]-[0023] to improve device characteristics including leakage current and break down current.

Re claim 2, the channel width being a total width of top surface and of the side surface is apparent in the figures above given the positioning of the gate. Re claim 3, the respective surfaces are shown in the figures, including recitation of (100), e.g., [0175], [0181]; and the (110) surface as the side surface would have been apparent or obvious given their orientation as shown in the figures.

Re claims 4, and 5, the use of a third MIS MP3 to connect to source or drain of the first and second MIS MP1, MP2, as well as a fifth and sixth transistors is also shown in Fig. 1 of above in Oikawa and Fig. 4 of Ogawa wherein the respective constant current source and circuit would result. A recitation directed to the manner in which a claimed apparatus is intended to be used does not distinguish the claimed apparatus from the prior art – if the prior art has the capability to so perform. See MPEP 2114 and *Ex parte Masham*, 2 USPQ2d 1647 (1987). The recitation of a new intended use for an old product does not make a claim to that old product patentable. *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997)

Re claims 6 and 8, the provision of n-channel and p-channel MIS wherein CMOS circuit can be obtained is delineated above in Hieda. The setting of desired gate widths as in claim 7 so the current drives can be substantially equal would have been

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obvious as it does not impart any structural differences and would have been within the purview of one skilled in the art in using the above invention and wherein such use is not precluded from the above invention. A recitation directed to the manner in which a claimed apparatus is intended to be used does not distinguish the claimed apparatus from the prior art – if the prior art has the capability to so perform. See MPEP 2114 and *Ex parte Masham*, 2 USPQ2d 1647 (1987). The recitation of a new intended use for an old product does not make a claim to that old product patentable. *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997)

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson 2003/0020540 A1, Fujimoto et al. 2002/0073778 A1, Inaba et al. 6,525,403, Yu 6,475,890 B1, are made of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tuan Quach whose telephone number is 571-272-1717. The examiner can normally be reached on M-F from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Sue Purvis can be reached on 571-272-1236. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan Quach
Primary Examiner